## IOWA BIRD LIFE

PUBLISHED QUARTERLY BY THE

#### IOWA ORNITHOLOGISTS' UNION

VOL. XXII

JUNE, 1952

NO. 2



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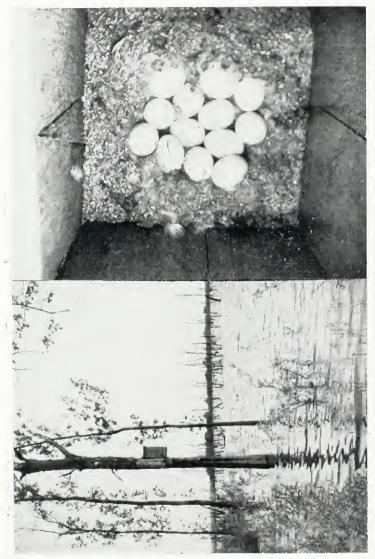
The Iowa Ornithologists' Union was organized at Ames, Iowa, February 28, 1923, for the study and protection of native birds and to promote fraternal relations among Iowa bird students.

The central design of the Union's official seal is the Eastern Goldfinch, designated State Bird of Iowa in 1933.

Publications of the Union: Mimeographed letters, 1923-1928; 'The Bulletin,' 1929-1930; 'Iowa Bird Life,' beginning 1931.

SUBSCRIPTION RATE: \$2.00 a year. Single copies 50c each. Subscription to the magazine is included in all paid memberships, of which there are four classes, as follows: Contributing Member, \$10.00 a year; Supporting Member, \$5.00 a year; Regular Member, \$2.00 a year; Junior Member (under 16 years of age), \$1.00 a year.

### EDITORIAL AND PUBLICATION OFFICE WINTHROP, IOWA



WOOD DUCK NESTING ON LAKE ODESSA AREA The left photograph shows a nest-box fastened to a tree in the Lake Oddessa area. A clutch of Wood Duck eggs viewed from the top of a nest-box is shown in the right photograph.

# WOOD DUCK PRODUCTION FROM NEST-BOXES AND NATURAL CAVITIES ON THE LAKE ODESSA AREA, IOWA, IN 1951

By ROBERT E. DREIS and GEORGE O. HENDRICKSON

Department of Zoology and Entomology Iowa State College AMES, IOWA

In 1950 Keith Schreiner initiated an investigation of the productivity of the Wood Duck aided by nest-boxes on the Lake Odessa Area, Louisa County, Iowa (Schreiner and Hendrickson, 1951). On the same area, during the spring and summer of 1951, the senior writer conducted an investigation to ascertain the Wood Duck production from natural cavities, and to determine the effect of an increased number of nest-boxes. The Lake Odessa Area contains 5,800 acres of which 2,500 acres are open water and 2,600 acres are marsh and timbered bottomland. The remaining 700 acres consist of tilled and abandoned farm land.

A total of 36 nest-boxes were erected in time to receive the nesting hens. The boxes were constructed of rough, unpainted lumber from plans designed by the U. S. Fish and Wildlife Service. The inside dimensions were 10 inches by 10 inches by 26 inches, with an entrance hole cut 6 inches down from the top of the box. The boxes were equipped with removable lids, and sawdust was placed in the bottom of the boxes as nesting material. They were fastened to dead trees entirely surrounded by water and to live trees on land. Tree climbers were used to aid in the inspection of both nest-boxes and natural cavities.

The flood crests of the Mississippi River in April, 1951, were among the highest on record (Lamoureux, 1951). At points along the Iowa shore the crests were above the record high-water levels of 1880. These floods caused severe breaks in the levees protecting the Lake Odessaa Area. All nest-boxes were inundated at the time Wood Ducks were actively seeking nesting sites. During the period of this investigation the water-level varied from a high of 20.9 feet to a low of 4.8 feet. Although three weeks of high water disrupted all normal procedures, the writers were able to study renesting possibilities in both nest-boxes and natural cavities.

The first sign of Wood Duck usage was a hollow in the sawdust made by the hen as the first egg was laid. The hen lined the nest with feathers and down during the egg-laying period and during early incubation. Before leaving the nest the hen usually covered the eggs with a mat of down and sawdust.

The first nest was established on April 1, and by April 21 eight boxes contained the eggs of Wood Ducks. Three nest-boxes were occupied by Hooded Mergansers and two nest-boxes contained eggs of both Wood Ducks and Hooded Mergansers. Kortright (1943) wrote of concurrent use of a cavity by Wood Ducks and Hooded Mergansers, and stated that the Wood Duck usually completed the incubation. Unfortunately, all the nests were destroyed by the floods which broke the levee on the night of April 21. The boxes contained a total of 108 Wood Duck eggs and 36 Hooded Merganser eggs.

An attempt was made to determine the rate of egg-laying. This was accomplished by noting the number of eggs laid in a particular nest between two dates of inspection. Thus, a rate of approximately one egg per day was determined from seven nests. Dump-nesting was believed to have occurred in three nest-boxes. In one box 20 eggs were laid in 15 days, in another box 17 eggs were deposited in 13 days, and in a third box 10 eggs were laid in eight days. Schreiner and Hendrickson (1951) in a similar investigation in 1950 reported one dump nest in which 16 eggs were laid in 14 days.

As the flood waters receded and exposed the nest-boxes, they were cleaned out and repaired, and fresh wood shavings were added. The first nest was reestablished on May 13 while the flood waters were yet within 3 feet of the bottom of the nest box. Nests continued to be established until June 18, when out of the total 36 nest-boxes nine (25 percent) were occupied by Wood Ducks.

Of the nine clutches started, six  $(66\ 2/3\ percent)$  brought off broods successfully. Three boxes, which contained a total of 13 eggs, were deserted. Of the 72 eggs in the successful boxes, 68 eggs  $(94\ percent)$  hatched success-

fully, three eggs were eaten by a raccoon and one egg was infertile.

The six broods contained from nine to 14 ducklings with a mean of  $11.3\pm1.61$ . The final brood hatched on July 31, which extended the nesting season over a period of 122 days. This was considerably longer than the previous year when Schreiner and Hendrickson (1951) found that the nesting season lasted 95 days. It was thought that the extended nesting season in 1951 was caused by the floods, and that the post-flood nests were all renesting attempts. No nests of the Hooded Merganser were established in nest-boxes after the flood waters receded.

Periods of incubation were established as closely as possible. The writers considered the time the last egg was laid as the onset of incubation. Incubation was terminated when the last duckling pipped the egg. Of the six boxes that brought off broods, the incubator periods were 28, 28, 31, 31, 32 and 32 days. It was noted that the later hatching broods had the longer incubation periods.

The temperament of the hens varied with the individuals. In general, the further incubation progressed the more reluctant the hens were to leave the nests. One instance which illustrated this tendency happened as follows. On the 24th day of incubation (June 22) for a particular nest, a severe windstorm dislodged the lid of the box. The hen remained with the eggs through the entire day and following night of heavy rains. In the 24-hour period of June 22 Lamoureux (1951) reported 2.22 inches of rain fell in Louisa County. Although the sawdust in the nest box was soaked, the eggs were kept warm and dry. The eggs hatched and the brood left the box successfully.

The exodus of young Wood Ducks from nest-boxes was witnessed on five occasions, in all of which the hen sat on the water in front of the box and called out the ducklings. The hens obviously did not know when all the ducklings had emerged as in four instances they continued to call for approximately 10 minutes after the last duckling had left the box. One hen led her brood away while one duckling was yet in the nest box, but that duckling

finally emerged and swam rapidly to join the rest of the brood.

An investigation of natural tree cavities was undertaken to determine the use by Wood Ducks. Only cavities with an entrance 3.5 inches in diameter or larger were considered. It was assumed that this measurement was the minimum that a Wood Duck could squeeze through. A total of 260 acres of timber was surveyed and 64 cavities located. Fifty-two cavities were examined in detail and of this total four (7.7 percent) were used by Wood Ducks, seven (13.5 percent) were deemed suitable for use by Wood Ducks, and 41 (78.8 percent) were considered as unsuitable for Wood Duck use. The critical factors in classing a cavity as suitable or unsuitable were the sizes of the nesting platform and cavity. The minimum platform used by Wood Ducks as found in this investigation was 108 square inches. The depth of the cavities used varied from 9 inches to 48 inches and the entrance dimensions were all considerably larger than the minimum 3.5 inches. The height above the ground varied from 8 feet to 25 feet with an average of 14.7 feet.

Broods were sought by cruising at low speed with boat and motor, by paddling through the flooded bottoms, by keeping watch from a motionless

boat and by trips on foot. Practically all the broods were seen very early in the morning from dawn until approximately eight o'clock. Including the six broods from the nest boxes, a total of 19 broods were located on the Lake Odessa Area. Thirteen broods evidently hatched from natural cavities. This total agrees quite well with the estimate made by Fritz Pierce, the Federal refuge manager.

At less than one week of age the broods were exceedingly difficult to find as they spent most of their time in dense cover on land. The ducklings remained at the hen's side at all times. At two to four weeks of age the brood ventured into the open, but swam into dense cover at any indication of danger. Growth during the first month of age was rapid, and at four to five weeks of age the ducklings were about one-half as large as the adult hen. When pursued they immediately dove under water and came out on shore. The ducklings were able to fly first in the sixth or seventh week of life. When pursued they flew a short distance and upon alighting on the water dove from sight. At eight weeks of age the ducklings were of the same size as the adult hen, and were capable of sustained flight.

At maturity, the broods observed averaged 7.6 ducklings. By multiplying this average by the total number of broods on the area, an estimated 144 juvenile Wood Ducks were believed to have been raised. In 1950 on the same area Schreiner and Hendrickson (1951) reported 21 broods averaging 7.1 ducklings to the brood, or 149 ducklings. It appeared that a slightly higher survival rate compensated for the smaller number of broods in 1951.

The adult hen often unwittingly gave away the presence of a brood with loud cries and by feigning injury. This sham was accomplished by beating the water with her wings and moving in a direction directly opposite to that in which the brood was hidden.

Musgrove (1947) stated that the eclipse plumage of the male Wood Duck is worn from June until late August or early September, but that the flightless period is sometime in July or August. On July 24 two male Wood Ducks were observed to be in full moult and rendered flightless by the loss of wing quills.

Due to the extreme fluctuations in water levels the growth of much aquatic vegetation was severely retarded. Only one location on the north end of the area grew any large beds of marsh smartweed. Early in May, Wood Ducks were observed feeding on duckweed, and this plant remained extremely abundant throughout the summer. In late August, Wood Ducks were observed flying to and from stands of oaks in the bluffs at the west end of the area. Musgrove (1947) and Bent (1923) mentioned acorns as an excellent Wood Duck food.

Fifteen nest-boxes were used by species other than Wood Ducks. Concurrent use by the Wood Duck and the Hooded Merganser was discussed previously. Fox squirrels used two nest boxes. It appeared that a squirrel and a Wood Duck had fought for possession of one box as evidenced by several hundred Wood Duck feathers and a belligerent squirrel in the box. Wasps and mud-daubers were found in five nest boxes. A pair of white-footed mice occupied one box erected on a tree on dry land. Red-headed Woodpeckers were observed entering and leaving nest boxes on several occasions as were Prothonotary Warblers, but neither of these birds attempted to nest in the boxes.

The Louisa County Chapter of the Izaak Walton League furnished labor and materials for 12 nest boxes. Messrs, Fred Schwob, Fritz Pierce and Dan Nichols deserve mention for their valuable suggestions and assistance generously given throughout the period of this investigation.

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#### THE "DIPPING" OF BRONZED GRACKLES

By JOHN C. W. BLIESE and GEORGE O. HENDRICKSON

Department of Zoology and Entomology Iowa State College AMES, 15WA

Ames, Iowa, is one of those midwestern cities blessed, or cursed (depending on one's point of view), with a Bronzed Grackle roost. In connection with a study of this roost and the roosting birds in it, numerous observations have been made of the several flight lines coming to town during the summer and fall evenings. Repeatedly a phenomenon has been noted which is striking to watch. For want of a better name it has been called "dipping" in the writers' notes.

For the main part, the birds have been observed to fly slightly above tree-top level on the last lap of their evening roosting flight. Minute after minute the birds will come in a continuous stream. Then all at once a portion of the flight line will suddenly lower its altitude, maintain this lower level for a few yards, or perhaps even 100 yards, and then rise again. The drop in altitude may be only a moderate one of a few feet, or it may extend to 3 or 4 feet above ground level. It may involve only two or three birds, or it may involve hundreds. There may be a wave of such dipping, the dip progressing either forward or backward along the flight line perhaps 20 to 100 feet or more. Whereas on some evenings only one or two dips will be noted, on other evenings it will be observed again and again, or perhaps not at all.

Bronzed Grackles are the chief performers. If Starlings happen to be present with the Grackles, they will dip with them. Alone, however, they have not been seen to do so. On several occasions a few Robins seemed to

The phenomenon builds up as the season progresses. It is not noted early in the roosting season when flocks are still small and the flights not too thoroughly organized. In 1951, for example, flight lines into Ames formed about the second week of June, but no dipping was noted until July 10 when a very weak one, given by a single group of 19 grackles, occurred. It was not noted again until July 18 when it was noted three times, each time being performed by only five to 10 grackles. The behavior began to be noticed fairly regularly about the last week in July, and the first very pronounced one was seen on August 1. It has been observed for two years in succession on four different flight lines, therefore it is not the behavior of an isolated group of birds. No dipping has been noted in the morning when the birds leave the roost, but data are too limited there to draw any conclusions.

Effort has been made, without success, to discover the stimulus that sets off this behavior mechanism. On one or two occasions the distant report of a gun, or the sudden popping of a motorcycle seemed to be related, but at other times similar sounds had no visible effect on the birds. Dipping most frequently was noted when no stimulus of any kind was evident. Clapping of hands by the observer located directly beneath or near the flight line invariably caused the line to veer, but never to dip.

Considering the commonness of this phenomenon at Ames, it is surprisingly absent in the literature. To date, at least, no clear reference to it has

been noted anywhere.

#### FROM THE OBSERVER'S NOTEBOOK

By WILLIAM YOUNGWORTH SIOUX CITY, IOWA

#### TELEVISION TOWERS AS BIRD PERCHES

Sioux City is located in what is known as the fringe area for television reception, as our nearest television broadcasting station is about 100 miles away and the next nearest about 175 miles. This fact necessitates the construction of high towers to insure any kind of television reception. These towers are high affairs, some of them soaring up toward 200 feet, as Sioux City is built on hills and valleys and towers are erected accordingly. These towers are supported by numerous guy wires and are crowned with a series of horizontal rods.

We have noticed that birds have come to like these towers for perches and that several species use them. Mourning Doves like to perch on the topmost bars and give their mournful calls. Starlings sometimes stop and whistle a few times. Brown Thrashers like to fly to the topmost bar and give their delightful song. Robins often light on the series of guy wires, then by short flights upward, finally reach the top and give a few cheerful twitterings. Bluebird families also perch on the towers in the fall. The most interesting observations to date have been the use of the towers by Purple Martins. These birds make use of the towers when the young are a-wing. A common sight is a family of young martins safely perched on the top antenna bars, where they are fed by the parents, often on the wing. It is apparent that the martins spend the night roosting on these towers, as they are seen there the last thing in the evening.

#### ROBIN BROODS - SUMMER OF 1951

This is an account of the nesting of a pair of Robins in and around our yard during the past season. The spring of 1951 is entered on the weather records as a cool, subnormal one with nearly 10 inches of excess moisture for the season - a season which deterred both the farmer and his friends, the wild birds. Our pair of Robins built their first nest rather late, in a maple tree in the adjoining parking. Eventually three birds grew up and were ready to leave the nest, but the almost daily rains kept them in the nest until well past the usual departure period. When they did leave the nest, they were more fully feathered than any young Robins I had ever seen. Even then they did not come down to the ground as so often young and helpless Robins do. They stayed well up in the branches of the trees, no doubt because it was still raining every day and the trees now afforded good protection. The parents had in the meantime started their second nest in a tree near our front porch. It was shortly thereafter that the three young birds came down to the lawn. Although they were now nearly as big as their parents, and had long tails, they still begged for food and seemed very dependent on their elders.

The saga of the second nest progressed more rapidly, with warming weather. One day four young, half-feathered Robins, in the usual Robin style, were flopping about the front walk. Children and dogs got two of them, as they could fly only 3 or 4 feet, and we herded the other two into our mulberry hedge. One of them had sense enough to stay there and he survived; the other one was accounted for by a neighbor's cat. Summer was now slipping away and the birds were in a hurry. The third nest was soon evident, in a locust tree in the neighboring yard to the rear. August was gone when two baby Robins came down from the nest in the locust tree. They were well feathered, but had extremely short tails and did not fly well. What caused concern was the fact that their parents had apparently deserted them. After their second day on the ground, they had to forage for themselves, but thanks to an abundant supply of honeysuckle and dogwood berries, which they gleaned from the ground, our young Robins did well. We augmented their diet with worms and grubs dug from the garden and tossed near them. They were quite tame and never refused an offering. In time their tails grew out and they flew away.

The question of why birds sometimes desert their young in the fall is an interesting one. It is apparent that when the nesting cycle is over, the strong migration instinct overcomes the family instinct and the young are deserted. A classic example of this desertion of young birds by their parents as the migration time approaches was observed by Fred J. Pierce at Winthrop, Iowa. (Purple Martins Desert Their Young, Iowa Bird Life, December, 1944, p. 78).

#### DOGWOOD BERRIES AS BIRD FOOD

It is a well-known fact that dogwood berries are a staple bird food in season, but it is always interesting to report on these various bird foods from time to time. It would be beneficial for every home owner to plant a dogwood bush somewhere in his backyard. The 1951 weather was an enigma to both farmer and city dweller, but more costly to the former. I am again dwelling on the lateness of the spring season. It adversely affected the corn crop, but prolonged the wild berry crop far beyond normal. Until mid-September migrating Red-eyed and Warbling Vireos lived in our dogwood tree and partook of the juicy white berries. In late September the dogwood fruit was still clinging to the stems when William Reed Felton, Jr., and I made an extended field trip near Sioux City. We disturbed flocks of hundreds of Robins from the various patches of dogwood as we passed through.

#### THE SMART BLUE JAY

Folks who make a little study of birds soon come to the conclusion that most birds are useful, but they can't find good words to say about the Blue Jay as he is always in the doubtful category. True, he takes some insects in season, but he also eats quantities of fruit and grain. He takes the eggs and kills the young of many useful songbirds. So, during the nesting season, we despise him as a cruel killer. Many householders shoot any visiting jay on sight. But his numbers remain about the same, and each spring and fall we witness the interesting migration flight. A few hardy jays stay with us during the winter months.

Some birds are much smarter than others, as species. We place the Blue Jay as one of the most intelligent of our bird neighbors. We try to keep water in the concrete bird-baths most of the year, and on cold fall mornings, when about an eighth-inch of ice has formed during the night, we like to watch these up-and-coming Blue Jays. The other birds sit around and twitter help-lessly for a drink, but not the Blue Jay. With his powerful ice-pick beak he punches a hole through the ice and drinks his fill. Later in the winter, when

the weather is below zero, the solid ice in the bird-waterer pushes up from the rim of the concave bowl and leaves an air space all around the bowl. Again our bird clown sizes up the situation and, with a few well-directed blows from his bill, knocks small chunks of ice from the edge of the ice cake and gobbles them down, thus mixing ice with the shelled corn he has just eaten from our feeding tray.

The sense of smell does not seem to be too well developed in birds and we are not often privileged to witness their use of this sense. During the early morning of November 25, 1951, 4 inches of light, fluffy snow fell. We looked out to see what birds might be feeding on the suet-post. We saw a Blue Jay fly down and land on a small wooden stake which stood above the snow 4 or 5 inches and marked a choice clump of painted daisy. The jay perched on the stake for a few moments, then dived into the snow and started beating its wings rapidly, much as if it were bathing in water. The snow flew and finally the bird reached the bare ground. There he speared a chunk of old, rancid suet. He must have smelled it through the 4 inches of soft snow. He was determined to get it even if he had to dig for it. This is another instance of the intelligence of the Blue Jay — a bird which we come to like during the long, cold winters, when his touch of bright blue is a welcome sight on an otherwise drab landscape.

#### THE CEDAR RAPIDS CONVENTION

By MRS. GEORGE CROSSLEY

Secy.-Treas., Iewa Ornithologists' Union

The 30th annual meeting of the Iowa Ornithologists' Union was held Saturday and Sunday, May 10 and 11, 1952, on Coe College campus, with the Cedar Rapids Bird Club as host. Registration began at 9 a.m. in the lobby of Hickok Hall. The morning session opened at 9:30 in the auditorium with addresses of welcome by H. H. Brooks, President of Coe College, in behalf of the College's centennial celebration, and Miss Marjorie Brunner, President of the Cedar Rapids Bird Club, in behalf of the local group. Our President, A. C. Berkowitz, gave the response.

The first speaker on the program was M. E. Stempel of the State Conservation Commission. His talk, "The Late Spring of 1951 and the Late Quail Hatch," was a summary of results obtained through laboratory experiments. He showed how, by measuring the length of Quail wing feathers, it is possible to estimate within two weeks the age of the birds and the time of batching. Slides were used by Thomas Morrissey of Davenport to illustrate his talk on "Some Parasites of Birds." Two groups of parasites were discussed: those that live within and those that live without their hosts. He concluded from his study that in most cases birds could live with their parasites without harm.

Dr. George O. Hendrickson of Iowa State College gave an interesting and technical interpretation of the "Magnetic-Vertical-Coriolis Theory of Bird Navigation." This was followed by "The Great Horned Owl, the Bird that Lives where It Can", presented by Dr. Paul L. Errington, also of Iowa State College. He told how the owl, a rather stupid bird without any special adaptability, makes the best of any environment and gets along because of a strong physique. Lester F. Faber, Supt. of Federal Aid for Conservation in Iowa, concluded the morning session with an explanation of "The Fish and Game Federal Aid Program." Slides were used to illustrate how the program is being carried out in various parts of our state.

The afternoon session opened at 1:30 with a most interesting talk on "Experiences with Wood Ducks," by Frederic Leopold of Burlington. His observations were based on years of first-hand knowledge with the ducks nesting in boxes on his property overlooking the Mississippi River. Tom Kent,

a high school student from Iowa City, gave a short talk on inexpensive equipment for use in photographing birds. He furnished proof of results obtained with a series of colored slides, which also illustrated what to do and what not to do in "Bird Photography". A film, "Behind the Flyways", provided by the Fish and Wildlife Service, was shown next. This explained the service of that organization to the hunter of today and tomorrow.

President Berkowitz presided at the business meeting which followed. By motion the reading of the minutes of the previous meeting was waived. The President appointed Geo. O. Hendrickson, A. W. Meyer, and Fred Pierce to serve on the bird list committee. Dr. Harold Ennis, R. W. Johnson, and Fred Kent were appointed to the Resolutions Committee. E. J. Petranek was asked to audit the Treasurer's books. Upon motion it was unanimously voted by the members that our Union be incorporated. Arthur Palas then read the Articles of Incorporation as drawn up by him and Charles Ayres, Jr. Questions were answered and technicalities explained to the members. By motion and unanimous vote the members formally accepted and adopted the Articles of Incorporation as read and approved. By motion and unanimous vote the Union formally adopted the increase in dues as acted upon at the fall meeting. The dues and memberships are as follows: Contributing, \$10.00, Supporting, \$5.00, Regular, \$2.00, Library, \$2.00, and Junior (under 16 years), \$1.00. Editor Pierce asked for more Iowa bird notes from members for publication in our magazine. The treasurer's report, which showed a balance of \$245.65, was read and accepted. Librarian Ennis reported on the year's acquisitions to the library. He requested members and speakers to place papers and other items of interest on permanent file in the library. He also asked for additional copies of old issues of "Iowa Bird Life." The President brought the unfinished business of the revision of the state check-list to the attention of the group, but no action was taken.

The afternoon meeting was concluded with the showing of "Sunrise Serenades", sound motion-picture film of the courtships of certain North American grouse, filmed by Charles W. Schwartz and Edgar M. Queeny, of St. Louis. The members had opportunity through the day to enjoy the many bird paintings of Earnest Steffen on display in an adjoining room. The Kents displayed a number of bird photographs in the lobby, where were also the latest

books on ornithology and natural history brought by Fred Pierce.

Members met again at Voorhees Hall at 6:30 p.m. for the annual banquet. President Berkowitz read letters from Miss Zell Lee, Charles Ayres, Jr., and the Drs. Roberts who were unable to attend the convention because of illness. After the banquet the group went to the newly-completed Sinclair Memorial Chapel, to be delightfully entertained with the showing of two exceptionally beautiful films with accompanying lecture entitled "Adventures in Color With American Birds and Big Game", by Cleveland P. Grant, of Mineral Point, Wisconsin. One film recorded the adventures of Mr. and Mrs. Grant in photographing big game animals in the Rockies, and the other showed the nest life of various species of birds. These films are among the finest produced in this country, and the accompanying narration by Mr. Grant was exceedingly interesting. The Sinclair Chapel was almost entirely filled by members and friends of the Cedar Rapids Bird Club who had been invited to attend this feature of the program. There were about 1000 persons in the chapel, and we believe this to be a record in the long series of annual meetings of the Union.

Sunday breakfast was served at Hotel Roosevelt at 4 a.m. Four birding trips were scheduled: 1) Swan Lake, Iowa River Valley, Amana Lake; 2) Lake Macbride State Park, Swan Lake; 3) Cedar Lake, Prairie Creek Woods, Dark Hollow of Palisades-Kepler State Park; and 4) Amana Lake, Dutch Lake Woods, East Amana. A light rain began before the groups started. There

was intermittent rain throughout the morning. All trips terminated at Hawkeye Downs Youth Center for one o'clock luncheon. A short business meeting
followed. The total bird count for the day was 137. Dr. Ennis read the report of the Resolutions Committee. The Nominating Committee presented
the list of new officers (as given on the title page of this issue) who were
elected by a unanimous ballot for the nominees cast by the Sec.-Treas. upon
motion of the voting members.

Invitations for the 1953 convention, from the Garden Club of Boone, and from Cornell College, in honor of its centennial, were extended by Myrle Jones and Dr. Harold Ennis, respectively. Upon motion it was unanimously voted by the members to accept the invitation from Cornell College. Since ro invitation was received for the fall get-together the President instructed the Executive Council to find a place for that meeting. A most enjoyable

convention was then adjourned.

Attendance Register.—AMES, Dr. P. L. Errington, Mil Ferguson, Dr. Geo. Hendrickson, Mr. and Mrs. R. W. Johnson, Dr. E. L. Kozicky; BOONE, Mr. and Mrs. M. L. Jones; BURLINGTON, Mr. and Mrs. Frederic Leopold; CE-DAR FALLS, Dr. M. L. Grant; CEDAR RAPIDS, H. H. Brooks, Dorothy and Marjorie Brunner, Mrs. Minnie Campbell, Esther Copp, Margaret Dickey, Emma Doornink, Lavina Dragoo, Mrs. C. C. Flodin, Dr. Karl Goellner, Dr. V. O. Hasek, Ondre Hasek, Isabell Hoyman, Dr. and Mrs. A. W. Meyer, Ethel Orr, Mr. and Mrs. E. J. Petranek, Lillian Serbousek, Mr. and Mrs. E. W. Steffen, Iola Tillapaugh, Dr. L. F. Vane, Dr. and Mrs. Robt. Vane, Wilma Van Orsdol, Mrs. Frank Waples, Pauline Wershofen, Myra Willis; COGGON, Walter Pike; DAVENPORT, Thos. Morrissey, Mr. and Mrs. Peter Petersen, Peter Petersen, Jr.; DECORAH, Mrs. Alden Bauder, Kay Henning, Mrs. Elsie Henning, Mrs. Tom Henning; DES MOINES, Bruce Berger, Mr. and Mrs. Albert Berkowitz, Mr. and Mrs. Woodward Brown, Mrs. W. G. DuMont, Lester Faber, Mrs. H. R. Peasley, Bruce F. Stiles, Lynn Willcockson; DUBUQUE, Mrs. W. R. Gruwell, Henry Herrmann, Mr. and Mrs. Neil Lutes, Clifford Johnson, Mrs. Mildred Pregler, Mrs. Robt. Ruegnitz, Ival Schuster, Edra Walter; FAR-LEY, Mr. and Mrs. Geo. Crossley; INDEPENDENCE, Ruth Funk; IOWA CITY, Bill Caldwell, Mr. and Mrs. Fred Kent, Tom Kent, Dr. and Mrs. Peter Laude, Bruce Nolf, L, O. Nolf; LISBON, Rev. M. C. Melcher, Vernon Melcher; MT. VERNON, Mrs. J. W. Bean, David Ennis, Dr. Harold Ennis; NASHUA, Mr. and Mrs. Robt. Pierce; NEWTON, Mr. and Mrs. J. Paul Moore, Jim O'Brien; OSKALOOSA, Mr. and Mrs. Wayne Partridge; OTTUMWA, Mrs. C. W. Soots, Mr. and Mrs. M. E. Stempel; POSTVILLE, A. J. Palas, Fritz Palas; SIG-OURNEY, Mr. and Mrs. Forrest Millikin: SIOUX CITY, Mr. and Mrs. W. W. Barrett, Bob Nickolson, Tillie Prestegard; THOR, Dennis Carter; WATER-LOO, Dr. Myrle Burk, Geo. Faulkner, Helen Hawkins, Russell Hays, Pearl Rader, Dr. C. W. Robertson; WAUKON, Warren Hayes; WINTHROP, Mr. and Mrs. F. J. Pierce, Mrs. J. M. Pierce; HOLLYWOOD, CALIF., Walter Bennett; NAPERVILLE, ILL., Dr. Warren Keck; FORT CHURCHILL, MANITOBA, W. E. Beckel; DEARBORN, MICH., Mr. and Mrs. Neil Reid; PROVIDENCE, RHODE ISLAND, Mrs. E. J. Ruff; MINERAL POINT, WIS., Mr. and Mrs. Cleveland P. Grant. Total registered, 121.

Birds Seen on the Field Trip, May 11, 1952.—Lesser Loon, Pied-billed Grebe, Double-crested Cormorant, Great Blue and Green Herons, American and Least Bitterns, Blue-winged Teal, Wood Duck, Lesser Scaup, Turkey Vulture, Sharp-shinned, Red-tailed, Red-shouldered, Marsh, and Sparrow Hawks, Osprey, Bob-white, Ring-necked Pheasant, Virginia Rail, Sora, Am. Coot, Semipalmated, Am. Golden, Black-bellied and Upland Plovers, Killdeer, Wilson's Snipe, Spotted, Solitary, Pectoral, White-rumped, Baird's and Least Sandpipers, Greater and Lesser Yellow-legs, Hudsonian Godwit, Ring-billed

Gull, Forster's and Black Terns, Mourning Dove, Yellow-billed Cuckoo, Great Horned and Barred Owls, Nighthawk, Chimney Swift, Ruby-thr. Hummingbird, Kingfisher, Flicker, Red-bellied, Red-headed, Hairy and Downy Woodpeckers, Eastern Kingbird, Crested and Least Flycatchers, Phoebe, Wood Pewee, Prairie Horned Lark, Tree, Bank, Rough-winged, Barn and Cliff Swallows, Purple Martin, Blue Jay, Crow, Chickadee, Tufted Titmouse, Whitebreasted Nuthatch, House and Prairie Marsh Wrens, Catbird, Brown Thrasher, Robin, Wood, Olive-backed, Gray-cheeked and Willow Thrushes, Bluebird, Blue-gray Gnatcatcher. Ruby-crowned Kinglet, Migrant Shrike, Starling, Bell's, Yellow-throated, Blue-headed, Red-eyed and Warbling Vireos, Black and White, Golden-winged, Blue-winged, Tennessee, Nashville, Parula, Yellow, Magnolia, Myrtle, Black-throated Green, Cerulean, Blackburnian, Chestnutsided, Black-poll and Palm Warblers, Oven-bird, Grinnell's and Louisiana Water-thrushes, Northern Yellow-throat, Am. Redstart, Bobolink, Eastern and Western Meadowlarks, Red-winged and Brewer's Blackbirds, Orchard and Baltimore Orioles, Bronzed Grackle, Cowbird, Scarlet Tanager, Cardinal, Rose-breasted Grosbeak, Indigo Bunting, Dickcissel, Purple Finch, Goldfinch, Red-eyed Towhee, English, Vesper, Lark, Chipping, Clay-colored, Field, Harris's, White-crowned, White-throated, Swamp and Song Sparrows, Total, 137.

#### GENERAL NOTES

Red-breasted Nuthatches at Tama.—A pair of Red-breasted Nuthatches came the first of November, 1951, and the female was still here on April 29. The male was killed one night in January, by a cat or squirrel I think. I heard a "thump" on the wall when it happened; the birds roosted up there every night and would often take nuts from the shelf to the wall. They would eat the nuts in some sheltered place, but I never learned just where. The little female was tame and saucy, and as late as April 29 was feeding on suet and nuts several times a day. Alone and so late in the season, she perhaps decided to stay with us for the summer.—MRS. W. G. MacMARTIN, Tama, Iowa.

Brown Thrasher Winters in Mt. Pleasant.—About the middle of December, 1951, when I was doing a little field work with my class in tree study, I saw a Brown Thrasher in an old orchard in the northeastern part of Mt. Pleasant, well within the city limits. The orchard was small and well protected by surrounding buildings. I thought this might be an overwintering specimen, which had found a source of food in a trash and garbage pile near by. On the morning of February 15, 1952, I took the bird class to the same site, and we were able to observe the thrasher at close range. On both trips the ground was covered with snow. I think we can safely assume that this bird spent the winter in the area.—D. D. MILLSPAUGH, Iowa Wesleyan College, Mt. Pleasant, Iowa.

**Bird Notes from Shenandoah.**—My daughter and I were very much interested in the Christmas census published in "Iowa Bird Life". The report of the White-crowned Sparrow by Mr. Palas claimed our attention, for we saw one February 2, 1952. It was in a "draw" with Tree Sparrows and Slate-colored Juncos — very near us and we had a good look at it.

On April 16, 1952, we stopped near a marshy meadow on the outskirts of town where there were numerous Great Blues and Black-crowned Night Herons. My daughter called my attention to a bird skulking behind clumps of grass near us. When it finally appeared it proved to be a Yellow-crowned Night Heron. I have had only one other record for this bird — April 6, 1940, at Hudson, Iowa, that bird also at close range. Though the other herons were at this marsh for several days, we didn't see the Yellow-crown again. Another thrill for us was the sight of six Willets. To get their wing pattern

daughter Jean finally ran toward them, and they rose, circled and came back to the place from which they were flushed.—MRS. ROBT. I. BORDNER, Shenandoah, Iowa.

Polk County Records.—On May 25, 1952, at the Impounding Reservoir near Des Moines, Albert Berkowitz and I saw three Caspian Terns. Near the same place, on May 31, 1952, a White-eyed Vireo was seen by Albert Berkowitz, Mr. and Mrs. James Decker, and the writer.—WOODWARD H. BROWN, Des Moines, Iowa.

Great Horned Owl Takes Rubber Duck Decoy.—During the 1951 duck hunting season our conversations with hunters in the Vinton region often reverted to the number of decoys that were being lost or stolen rather than to the number of ducks bagged. One day we were short one decoy but did not report the loss to our friends because we could not understand why only one had been taken. The answer came ten days later when the farmer on whose place we hunted brought in a Great Horned Owl that apparently had mistaken one of our rubber decoys for a live duck. In taking it from the pond, the owl had become entangled in the cord, which finally had caught on a fence approximately 80 rods from the pond. The owl, unable to free itself, had died from starvation and exposure.—HARRY E. RECTOR, Vinton, Iowa.

Studies of Nocturnal Bird Migration in Iowa.—In the autumn of 1952, observers all over the United States will be training telescopes on the moon to obtain counts of migrating birds passing before its disk. These counts will be used to determine the volume and direction of night migration at different times and places. By the analysis of such data, it will be possible to map the flow of migration, to study the effects of weather, and to determine the hour-to-hour pattern of activity. The methods to be employed, and some of the surprising results already achieved by them have been described in a recent paper by George H. Lowery, Jr. ("A Quantitative Study of Nocturnal Bird Migration," University of Kansas Publications, Museum of Natural History, vol. 3, no. 2, pp. 361-472).

In a previous cooperative investigation in the spring of 1948, participated in by over 200 bird students and astronomers at 30 widely separated stations, Iowa was represented by the excellent work of a group at Ottumwa under the direction of Charles C. Ayres, Jr. There, 44 hours of moon-watching, covering 10 nights in April and May, yielded the second highest estimated total of migrants per mile of front to be reported that year - 134,000 birds. Lowery says of the observations, "At Ottumwa, Iowa . . . densities were near the maximum for all stations. Considering this fact, along with results at Lawrence and other mid-western stations where cloud cover did not interfere at the critical periods of observation, we have here evidence supporting the generally held thesis that eastern Kansas, Missouri, and Iowa lie on a principal migratory flyway." The Iowa results, besides contributing to many conclusions of a general nature were also notable for the shifts from night to night of the major flight trend, in contrast to some other stations where the directions show great consistency. Just how this should be interpreted, we shall not know until further tests have been conducted.

It is hoped that in the fall of 1952 the station at Ottumwa will be joined by others in Iowa. The more numerous the localities where observations are being made, the more interesting are the comparisons that may be drawn, and the more dependable the conclusions that can be reached. The observational procedure is an extremely simple one, requiring no previous experience. Anyone who has access to a small telescope, or a large one, can participate. Interested persons are urged to write at once for further details to Robert J. Newman, at the Museum of Zoology, Louisiana State University, Baton Rouge,

La., where the data will be mathematically processed.—ROBERT J. NEW-MAN, Baton Rouge, Louisiana.

Travels of a Red-shouldered Hawk.—On August 12, 1951, I captured an immature Red-shouldered Hawk on Credit Island, at Davenport. On August 17 the bird was shot at Worthington, in Dubuque County. According to the report from the Fish & Wildlife Service, it was shot near some chickens. At the time I released this bird a number of hawks of various species were already migrating south over the area, but this hawk chose to move up the river instead of down and was shot some 70 miles from Davenport five days later.—JAMES HODGES, Davenport, Iowa.

Bell's Vireo Nesting at Dubuque.—In mid-May, 1952, a friend called me about a pair of vireos which were building a nest in a bramble of blackberry bushes in some empty lots back of her house. I went to see the nest and the bird, which was a Bell's Vireo. We had fine views of it. The size and coloring, the habit of singing as it worked on its nest, and the nest itself, in a bush instead of in a tree, all fitted the description of Bell's Vireo. The song was different from any other vireo song I have heard. My friend is going to save the nest for me.—MRS. ROBERT RUEGNITZ, Dubuque, Iowa.

Two Records of the Hooded Warbler in Iowa.—Mrs. Crossley and I observed a Hooded Warbler on April 8, 1950, in the ravine under Cascade Bridge at Burlington. We had clear and close views of the bird in low, leafless bushes and on the ground. A few weeks later Roger Tory Peterson told us that this warbler had been reported unusually early in several cities, including Rockford and Chicago, outside of its normal range. One reason given for the accidental appearance of the warbler was the severe hurricane in the south prior to the date of reports. (See also report by Thomas J. Feeney of Davenport in Sept. 1950, Iowa Bird Life.) On May 3, 1952, we again had good views of the Hooded Warbler, in Linwood Cemetery at Dubuque. This time he sang for us, another clue to his identification. Due to the dense foliage we were unable to follow him as he went farther into the brush. We were not fortunate in seeing him the next day on our annual Field Trip for the club.—GEORGE E. CROSSLEY, Farley, Iowa.

#### RECENT BIRD BOOKS

THE HISTORY OF AMERICAN ORNITHOLOGY BEFORE AUDUBON, by Elsa Guerdrum Allen (American Philosophical Society, Philadelphia, 1951; paper wrappers, 4to, pp. 385-591, with 55 illustrations; price, \$2.00).

Bird students who have been accustomed to think of ornithology in America as beginning with the illustrious Audubon, are going to find this new book a revelation. It will revise any false notions as to early ornithological history, and will provide many hours of pleasant, informative reading. Mrs. Allen has done a wonderful work in research, and those who are seriously interested in birds will long be indebted to her for furnishing this scholarly volume of history.

She begins the book by giving an account of ancient bird lore, sketching Aristotle's studies of birds in the Middle Ages, and going on to Pliny, Coiter and numerous other early naturalists. One chapter is given over to "Early Bird Lore in England", and another to "Early Bird Lore in the Western World." In the latter there are such names as Oviedo, Richard Eden, De Acosta, De La Vega, Samuel de Champlain, Father Hennepin, Nicolas Denys, Labat, De Rabie, Le Moyne, and many others.

There is an excellent chapter on Mark Catesby, who is credited with founding American ornithology. His two-volume work, "Natural History of Carolina, Florida and the Bahama Islands" (1731-1743), was so superior to earlier publications it gave Catesby the rank of the first real American nat-

uralist. Although he visited the east coast of United States primarily for botanical studies, he became intensely interested in bird life and completed more than 100 fine plate of birds. The biography of Catesby is very interesting and brings out a great many little-known facts on this colorful personality.

In a chapter entitled "American Ornithology Under European Compilers", there are well-rounded sketches of Eleazar Albin, George Edwards, Linnaeus, Thomas Pennant and John Latham. Then follow descriptions of others who visited the continent and left their mark on the literature — Johann Forster, Charlevoix, Du Pratz, Chastellux, de Crevecoeur, Bossu, and Peter Kalm. Among the early ornithological explorers in the interior of America we find such names as Henry Ellis, Humphrey Marten, Thomas Hutchins, Capt. Cartwright, Jonathan Carver, John Drayton, Benjamin Barton, William Bartram, and John Abbot.

It is fitting that the book should close with a long and complete biography of Alexander Wilson, the father of American ornithology. The tendency in recent years has been to glorify Audubon and ignore his predecessor, Wilson. Mrs. Allen corrects this error and gives us a revealing picture of the man who in many former accounts has been made to appear drab and ordinary. It is a stimulating portrayal, in keeping with the style of the rest of the book, and is an excellent tribute to the deserving Wilson.

The reproductions of letters, portraits and bird plates, liberally scattered through the book, make a valuable addition to the text.—F. J. P.

A CHECK-LIST OF THE BIRDS OF VIRGINIA, by Joseph James Murray (Virginia Society of Ornithology, Williamsburg, Va., 1952; paper wrappers, 8vo, pp. 1-113; price, \$1.50).

This is an excellent state bird list, compiled by Dr. Murray with the cooperation of many members of the society who furnished records. The state is rich in bird life and historical associations; 398 bird forms are given, with 14 additional on the hypothetical list. The early pages of the book mention some of the birds recorded in history by such men as Captain John Smith and Mark Catesby, followed by an outline of ornithological work in the state from 1800 to 1930. There is a discussion of the physical features and faunal zones of the state, and a short bibliography. The species list is well annotated and packed with information.—F. J. P.

ENJOYING BIRDS IN MICHIGAN, edited by Homer D. Roberts and Clarence J. Messner (Michigan Audubon Society, Jackson, Mich., 1952; paper wrappers, 8vo, pp. 1-64, with more than 100 illustrations; price, \$1.00).

Another excellent state publication, this book has the popular approach to bird study and should go a long way in making people bird-conscious. In a section on "Some Common Michigan Birds We Should Know", 80 species are briefly described, each with an accompanying pen drawing. There is an article on the Kirtland's Warbler, another on the Sandhill Crane, and one on the Robin, State Bird of Michigan. There is a full check-list for the state, together with a pictorial map-guide to birding areas within the state and written instructions as to where to go. Brief chapters on attracting birds, bird photography, bird-banding, field-study helps, bird migration, and an account of the various activities of the Michigan Audubon Society, round out this very useful and attractive booklet which other state bird societies might profitably imitate.—F J. P.

The May-August (Vol. 7, No. 5) issue of "Atlantic Naturalist", published by the Audubon Society of the District of Columbia, contains the first part of a fine biography of Dr. Paul Bartsch. This is especially interesting to us be-

cause Dr. Bartsch lived in Iowa for many years and was a pioneer ornithologist in our state (see Mrs. Taylor's biographical sketch of Dr. Bartsch in Iowa Bird Life, 1942, pp. 36-39). This issue of the Atlantic also contains an article on Cardinals nesting, with six photographs, by Tom Kent of Iowa City.

#### MEMBERSHIP NEWS

Dr. Mary Price (Mrs. F. L. R.) Roberts wrote the below letter from Corona, California, under date of May 8, 1952. It was read at the annual banquet of the Union, at Cedar Rapids, May 10. To Our Friends of IOU:

We will greatly miss your companionship at this convention and meeting old acquaintances among Iowa birds. Frank had a severe stroke in October. We have moved to California and bought a home next door to our daughter, Velma, and family. Frank was in the University Hospital at Christmas time. I was needed almost constantly night and day, and had to give up sending Christmas greetings. We were happy to hear from many of you. Frank is slowly improving and will probably be able to walk again by winter.

Just this morning a flock of Cliff Swallows chose our eaves for their homes, thus taking us right in as new California residents.

For many years the Union has been one of our greatest interests and pleasures. We wish for it continued prosperity and usefulness. As we write this we recall many of you individually and regret we are not with you. We especially want to congratulate Editor Fred Pierce, and may "Iowa Bird Life" continue at its present high standard. And to Dr. Ennis we want to wish a healthy growth of the IOU library under his care. To all of you, an interesting program and good weather for hikes in a wonderful bird territory.

Dr. Herbert Brandt, author of the recently-published "Arizona and Its Bird Life", as well as several other popular bird books, recently sent a three-year subscription to "Iowa Bird Life", with the following comment: "I find you are doing a good job in the editing, while the articles have that type of vigor which stems from practical field observation. There are altogether too few of this type of literature now appearing, and I am glad to learn that you are contributing your share to its maintenance."

Mrs. Robert Ruegnitz of Dubuque had a fine trip of 6,000 miles down into Arizona and the Southwest, from April 17 to May 8. They drove across all or a part of 10 states, with the Tucson area as the main objective of the trip. As a result of reading Dr. Brandt's "Arizona and Its Bird Life", the brief stop they had planned for the Chiricahua Mountains developed into a nine-day stopover and gave Mrs. Ruegnitz one of the most interesting of all her bird experiences. They found a guest ranch within the borders of the Chiricahua National Monument, and with the cooperative attitude of their hosts, it proved to be a birder's paradise where no less than 36 new birds were added to their list. On side trips near there other birds were added, while Saguaro National Monument yielded 13 additional new birds. Mrs. Ruegnitz is enthusiastic in her praise of Arizona, and closes the descriptive letter of her trip with this wish: "I hope that any of our Iowa bird people who haven't yet birded in Arizona will go there sometime and I especially hope they will visit the Chiricahuas."

#### FALL MEETING, WATERLOO, SEPTEMBER 14

The 1952 fall IOU meeting will be held Sunday, September 14, at the farm home of Mr. and Mrs. Donald Sage, who live several miles northeast of Waterloo. A full announcement, as well as a map showing how to reach the Sage farm, will be sent to all members about September 1. The meeting is being sponsored by the Waterloo Audubon Society.